REMARKS

Status of Claims:

Claims 1-14 were pending in the application; Claim 1 is hereby cancelled without prejudice or disclaimer of subject matter contained within. Claim 15 is newly-presented. Claims 2-15 are now pending. Each of the pending claims defines an invention that is novel and unobvious over the cited art. Favorable consideration of this case is respectfully requested.

Rejection Under 35 U.S.C. § 102(b):

Claims 1-5 and 9 were rejected under 35 U.S.C. § 102(e) as being anticipated by Seita (6,881,319).

Rejection under 35 U.S.C. § 102 requires the prior art disclose each and every recitation of the claimed invention.[1] In determining anticipation, no claim recitation may be ignored.[2] Anticipation requires the disclosure, in a prior art reference, of each and every recitation as set forth in the claims.[3] There must be no difference between the claimed invention and reference disclosure for an anticipation rejection under 35 U.S.C. § 102.[4] Claim 1 is hereby amended to further clarify at least one distinction over the cited art. The evidentiary record fails to teach each recitation of the present invention, as amended, in view of the silence of Seita regarding determining a threshold concentration of a void-formation marker (VFM).

Claim 1 has been canceled and new Claim 15 is presented. Claims 2-9 now depend from Claim 15. New Claim 15 recites determining a ratio of accelerator breakdown product (VFM) to accelerator. Claim 15 further recites determining a threshold value as the large VFM concentration at which no voiding is observed.

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[1] *See* MPEP § 706.02.
[2] *See Pac-Tex, Inc. v. Amerace Corp.*, 14 USPQ2d 1871 (Fed. Cir. 1990).
[3] *See Titanium Metals Corp. v. Banner*, 227 USPQ 773 (Fed. Cir 1985); *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 1 USPQ2d 1081 (Fed. Cir 1986); and *Akzo N.V. v. U.S. International Trade Commissioner*, 1 USPQ2d 1241 (Fed. Cir 1986).
[4] *See Scripps Clinic and Research Foundation v. Genentech, Inc.*, 18 USPQ2d 1001 (CAFC 1991) and *Studiengesellschaft Kohle GmbH v. Dart Industries*, 220 USPQ 841 (CAFC 1984).

As the Examiner states, Seita determines the concentration of an accelerator by-product which may be equivalent to the VFM of the present invention. Seita maintains the by-product concentration below a pre-determined value (column 5, lines 56-67). The pre-determined value of Seita relates to plating without "frosting" (line 60) and/or keeping a gloss finish (lines 61-2). The values of Seita do not relate to void-formation. Seita does not teach determination of a ratio of VFM to accelerator concentration. Moreover, Seita does not teach the determination of a threshold concentration as the highest concentration of an accelerator breakdown product observable without void formation. Seita relates to an arbitrary, pre-determined value, whereas, the present invention relates to an empirically-determined upper concentration limit at which no voiding is observed. Morover, the present invention relates to a ratio of VFM concentration to accelerator concentration. Seita does not relate to a ratio.

Rejections Under 35 U.S.C. § 103(a):

Claim 6 was rejected under 35 U.S.C. § 103(a) as being obvious in view of Seita together with Skoog (*Fundamentals of Analytical Chemistry*).

Claims 7-8 were rejected under 35 U.S.C. § 103(a) as being obvious in view of Seita together with Talasek (US 2004/0108213).

Claims 12-14 were rejected under 35 U.S.C. § 103(a) as being obvious in view of Seita together with Kopp (6,083,374).

To establish *prima facie* obviousness of a claimed invention, all the claim recitations must be taught or suggested by the prior art. *In re Royka.*[5] All words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson.*[6] (MPEP § 2143.03). When evaluating the scope of a claim, every recitation in the claim must be considered. See e.g. *In re Ochiai.*[7] (MPEP § 2144.08). The evidentiary record fails to teach each recitation of the present invention as amended. Specifically, the references taken as a whole or severally fail to

[5] *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).
[6] *In re Wilson*, 424 F.2d 1382, 165 USPQ 496(CCPA 1970).

teach the determination of a threshold concentration of a void-formation marker (VFM). Specifically, none of the references teach the highest VFM concentration at which no voids aare formed. Moreover, the references fail to teach determination of a ratio of VFM to accelerator concentration.

The failings of Seita have been discussed above in connection with the rejection under § 102. Skoog merely teaches ion-pairing, a method of analytical chromatography, but does not supply the necessary teaching because Skoog does not relate to determination of a threshold value of a VFM for a plating bath. Talasek teaches that plating-bath by-products may be measured by spectroscopy or electrochemical methods. However, Talasek does not teach measurement of a voiding threshold concentration. Kopp does not complete Seita because Kopp teaches a bleed and feed method, but is silent as to determining a voiding threshold concentration.

Claims 10-11 were rejected under 35 U.S.C. § 103(a) as being obvious in view of Chalyt (6,749,739) together with Blachier (6,569,307).

Chalyt relates to analysis of suppressor breakdown products, whereas the application relates to analysis of accelerator breakdown products. In particular, the present invention relates to the analysis of sulfur-containing species. Chalyt relates to the breakdown of high molecular weight polyethylene and polypropylene glycols. Blachier discloses accelerator breakdown products, but does not disclose a threshold concentration (the highest non-voiding VFM concentration divided by the accelerator concentration). Blachier relates to method of continuously adding to and draining a plating bath to maintain the concentration of a product either below a pre-determined value (column 4, line 16) or above a predetermined value (column 4, line 24). Neither Chalyt nor Blachier disclose a threshold concentration as the highest non-voiding VFM concentration divided by the accelerator concentration.

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[7] *In re Ochiai*, 71 F.3d 1565, 37 USPQ2d 1127 (Fed. Cir. 1995).

Conclusion:

In view of the above, consideration and allowance are respectfully solicited.

Accordingly, it is respectfully requested that the foregoing amendments be entered, that the application as so amended receive an examination on the merits, and that the claims as now presented receive an early allowance.

In the event the Examiner believes an interview might serve to advance the prosecution of this application in any way, the undersigned attorney is available at the telephone number noted below.

The Commissioner is hereby authorized to charge any fees or credit any overpayment associated with this communication, including any extension fees or fees for the net addition of claims, to Deposit Account No. 22-0185.

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Respectfully submitted,

By___/John A. Evans/_____
John A. Evans
Registration No.: 44,100
CONNOLLY BOVE LODGE & HUTZ LLP
1990 M Street, N.W., Suite 800
Washington, DC 20036-3425
(202) 331-7111
(202) 293-6229 (Fax)
Attorney for Applicant